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I certify that I am depositing this paper pursuant to 37 CFR §1.8 with the United States Postal Service with sufficient postage as **First Class Mail** in an envelope addressed to the Assistant Commissioner for Patents, Washington D.C. 20231 on 14 November 2000.

Anne Marie Pickel

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Patent #1734

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of HERR et al.		
Serial No.	09/336,245	Group Art Unit: 1734
Filing date:	June 18, 1999	Examiner: T. Zalukaeva
Title:	Die Attach Adhesives for Use in Microelectronic Devices	Date of this response: 13 November 2000

AMENDMENT pursuant to 37 CFR 115

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

This is in response to paper number 4 mailed 07 August 2000, and includes a Petition for an Extension of Time.

Claims 1 to 37 are pending in the application.

Claims 8 to 36 are withdrawn from consideration.

Claims remaining for consideration are claims 1 to 7 and 37.

Applicants affirm election of claims 1 to 7 and 37 (Group I) for prosecution without traverse.

Claims 1, 4, 5, 6, and 7 are amended. Claims 2 and 3 are canceled.

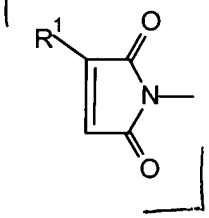
Applicants request reconsideration of this application in view of the following amendments and remarks.

AMENDMENT

Kindly cancel claims 2 and 3 and amend claims 1, 4, 5, 6, and 7 as follows:

1. (amended) A curable adhesive composition for ~~use in~~ bonding an electronic component to a substrate comprising a maleimide compound and a curing initiator selected from the group consisting of a free-radical initiator, a photoinitiator, and a combination of those, the maleimide compound having the formula $[M–X_m]_n – Q$ in which m is 0 or 1and n is 1 to 6, and

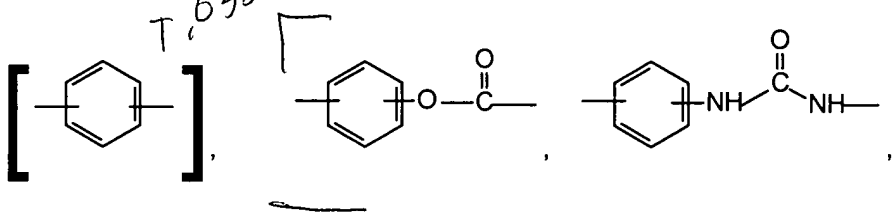
(a) M is a maleimide moiety having the structure:



in which R^1 is H or an alkyl group having 1 to 5 carbon atoms;

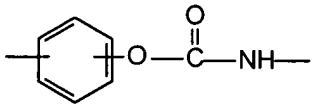
(b) X is an aromatic group selected from the group of aromatic groups having the structures:

[(I)] [(II)] [(III)]



and

[(IV)]

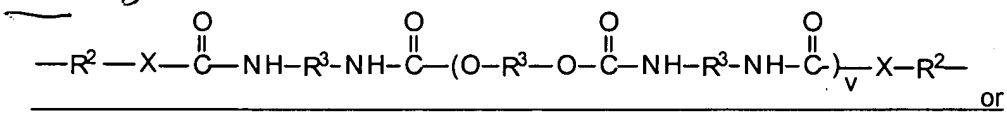


;

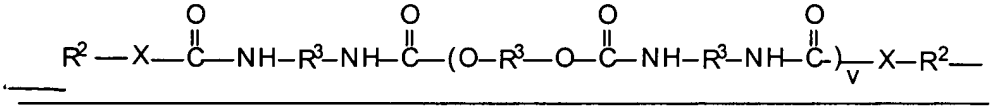
and

[(c) Q is a linear or branched chain alkyl, alkyloxy, alkyl amine, alkyl sulfide, alkylene, alkyleneoxy, alkylene amine, alkylene sulfide, aryl, aryloxy, or aryl sulfide species, which may contain saturated or unsaturated cyclic or heterocyclic substituents pendant from the chain or as part of the chain, and in which any heteratom present may or may not be directly attached to X;]

~~(c) Q is a urethane having the structure:~~

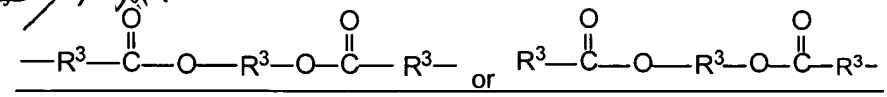


or



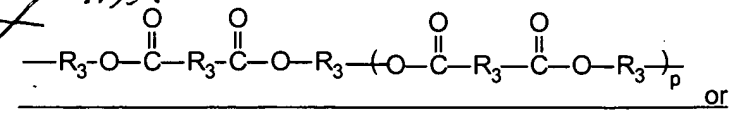
in which each R^2 independently is an alkyl, aryl, or arylalkyl group having 1 to 18 carbon atoms; R^3 is an alkyl or alkyloxy chain having up to 100 atoms in the chain, which chain may contain aryl substituents; X is O, S, N, or P; and v is 0 to 50.

~~(d) Q is an ester having the structure:~~

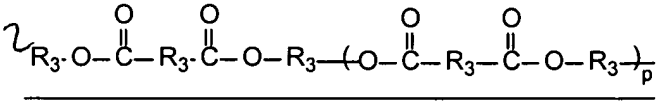


in which R^3 is an alkyl or alkyloxy chain having up to 100 atoms in the chain, which chain may contain aryl substituents; or

~~(e) Q is an ester having the structure:~~

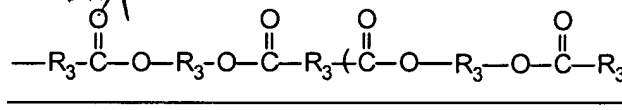


or



in which p is 1 to 100, and each R^3 can independently be an alkyl or alkyloxy chain having up to 100 atoms in the chain, which chain may contain aryl substituents; or each R^3 can independently be a siloxane having the structure $-(CR^1_2)_e-[SiR^4_2-O]_f-SiR^4_2-(CR^1_2)_g-$ in which the R^1 substituent independently for each position is H or an alkyl group having 1 to 5 carbon atoms, the R^4 substituent independently for each position is an alkyl group having 1 to 5 carbon atoms or an aryl group, e and g are independently 1 to 10, and f is 1 to 50; or

~~(f) Q is an ester having the structure:~~



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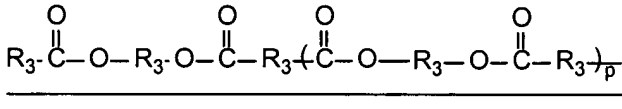
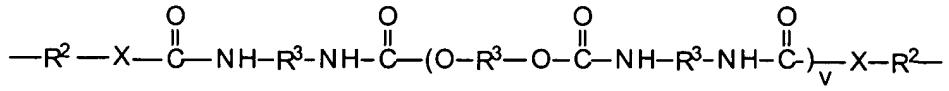
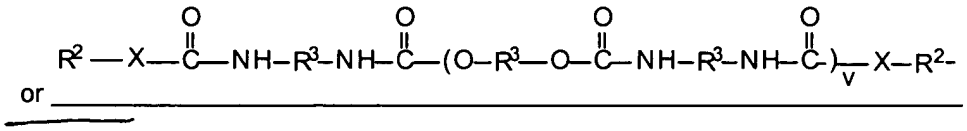


in which p is 1 to 100, and each R^3 can independently be an alkyl or alkyloxy chain having up to 100 atoms in the chain, which chain may contain aryl substituents; or each R^3 can independently be a siloxane having the structure $-(CR^1_2)_e-[SiR^4_2-O]_f-SiR^4_2-(CR^1_2)_g-$ in which the R^1 substituent independently for each position is H or an alkyl group having 1 to 5 carbon atoms, the R^4 substituent independently for each position is an alkyl group having 1 to 5 carbon atoms or an aryl group, e and g are independently 1 to 10, and f is 1 to 50.

2~~4~~. (amended) The curable adhesive composition according to claim 1 in which Q is a urethane having the structure:

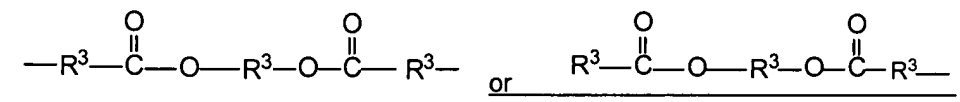




or

in which each R^2 independently is an alkyl, aryl, or arylalkyl group having 1 to 18 carbon atoms; R^3 is an alkyl or alkyloxy chain having up to 100 atoms in the chain, which chain may contain aryl substituents; X is O, S, N, or P; and v is 0 to 50.

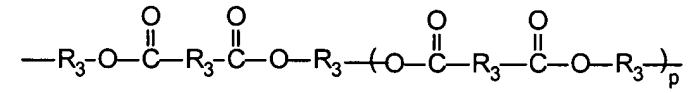
3~~5~~. (amended) The curable adhesive composition according to claim 1 in which Q is an ester having the structure:



or

in which R^3 is an alkyl or alkyloxy chain having up to 100 atoms in the chain, which chain may contain aryl substituents.

4~~6~~. (amended) The curable adhesive composition according to claim 1 in which Q is an ester having the structure:



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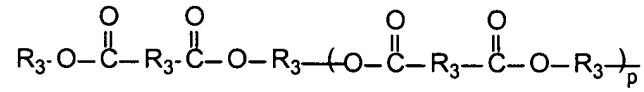
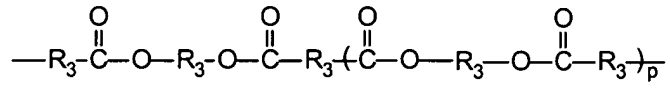


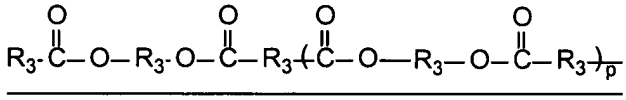
in which p is 1 to 100, and each R^3 can independently be an alkyl or alkyloxy chain having up to 100 atoms in the chain, which chain may contain aryl substituents; or each R^3 can independently be a siloxane having the structure $-(CR^1_2)_e-(SiR^4_2-O)_f-SiR^4_2-(CR^1_2)_g-$ in which the R^1 substituent independently for each position is H or an alkyl group having 1 to 5 carbon atoms, the R^4 substituent independently for

each position is an alkyl group having 1 to 5 carbon atoms or an aryl group, e and g are independently 1 to 10, and f is 1 to 50.

57. (amended) The curable adhesive composition according to claim 1 in which Q is an ester having the structure:



or



in which p is 1 to 100, and each R^3 can independently be an alkyl or alkyloxy chain having up to 100 atoms in the chain, which chain may contain aryl substituents; or each R^3 can independently be a siloxane having the structure $-(CR^1_2)_e-(SiR^4_2-O)_f-SiR^4_2-(CR^1_2)_g-$ in which the R^1 substituent independently for each position is H or an alkyl group having 1 to 5 carbon atoms, the R^4 substituent independently for each position is an alkyl group having 1 to 5 carbon atoms or an aryl group, e and g are independently 1 to 10, and f is 1 to 50.